ICREDL (W)

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565924

Work order no:- 013-17-000083

Serial No. .....

Name of Work Improvements to CC roads in Dasarahalli Adjacent main roads in ward no.13. Shettyhalli sub Division From ..... To .....

Name of Contractor or nature of Agency .....

Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
	Work order no:- BBMP/EE/DD/WO/48/17-18						01/05/17
	Premeasurement:-						
	Earth work excavation by manual mean in ordinary soil including throwing in average horizontal throw upto 2m etc complete.						
	With work =	1	30.00	$\frac{4.30+4.30}{2}$	0.50	= 64.50	
		1	30.50	$\frac{4.30+3.90}{2}$	0.50	= 61.50	
		1	30.10	$\frac{3.90+3.65}{2}$	0.50	= 51.75	

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
	12th Cross road =	1×1	8.40	$\frac{3.20+3.70}{2}$	0.50	= 14.07	
		1×1	30.0	$\frac{4.50+4.60}{2}$	0.50	= 68.25	
		1×1	30.0	$\frac{4.60+4.30}{2}$	0.50	= 66.75	
		1×1	30.0	$\frac{4.30+4.50}{2}$	0.50	= 66.0	
		1×1	30.0	$\frac{4.50+4.50}{2}$	0.50	= 67.50	
		1×1	7.60	$\frac{4.50+4.50}{2}$	0.50	= 17.10	
	13th Cross road =	1×1	30.0	$\frac{5.10+4.50}{2}$	0.50	= 72.0	
		1×1	30.0	$\frac{4.50+4.60}{2}$	0.50	= 68.25	
		1×1	30.0	$\frac{4.60+4.50}{2}$	0.50	= 68.25	
		1×1	30.0	$\frac{4.50+4.50}{2}$	0.50	= 67.50	

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565925

Serial No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
	14th cross road =	1×1	6.20	(4.50+4.50)/2	0.50	= 13.95	
		1×1	30.0	(4.40+4.30)/2	0.50	= 65.25	
		1×1	30.0	(4.30+4.50)/2	0.50	= 66.0	
		1×1	30.0	(4.50+4.60)/2	0.50	= 68.25	
		1×1	30.0	(4.60+4.70)/2	0.50	= 71.25	
		1×1	4.50	(4.90+4.90)/2	0.50	= 11.02	
	=	1×1	30.0	(4.80+5.50)/2	0.50	= 77.25	
		1×1	24.0	(4.30+3.60)/2	0.50	= 43.80	

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
	11PM CWKS =	2×3	30.0	0.45	0.40	= 32.40	
		2×1	8.40	0.45	0.40	= 3.02	
	12PM CWKS =	2×4	30.0	0.45	0.40	= 43.20	
		2×1	7.60	0.45	0.40	= 2.74	
	13PM CWKS =	2×4	30.0	0.45	0.40	= 43.20	
		2×1	6.20	0.45	0.40	= 2.23	
	14PM CWKS road =	2×4	30.0	0.45	0.35	= 37.80	
		2×1	4.50	0.45	0.35	= 1.42	
						1335.87 m^3	
						Limit to = 1304.92 m^3	

6/5/17

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565926

Serial No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
	Construction of granular sub-base by providing coarse graded crushed stone aggregates of granite / trap / local materials. &c.						
	= 1×1		30.00	$\frac{4.30+4.30}{2}$	0.20	= 25.80	
	1×1		30.0	$\frac{4.30+3.90}{2}$	0.20	= 24.60	
	1×1		30.0	$\frac{3.90+3.9}{2}$	0.20	= 20.70	
	1×1		8.40	$\frac{3.0+3.70}{2}$	0.20	= 5.63	
	= 1×1		30.0	$\frac{4.50+4.60}{2}$	0.20	= 27.30	
	1×1		30.0	$\frac{4.60+4.30}{2}$	0.20	= 26.70	

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
		1×1	30.0	$\frac{4.30+4.50}{2}$	0.20	= 26.40	
		1×1	30.0	$\frac{4.50+4.50}{2}$	0.20	= 27.0	
		1×1	7.60	$\frac{4.50+4.50}{2}$	0.20	= 6.84	
		1×1	30.0	$\frac{5.10+4.50}{2}$	0.20	= 28.80	
		1×1	30.0	$\frac{4.50+4.60}{2}$	0.20	= 27.30	
		1×1	30.0	$\frac{4.60+4.50}{2}$	0.20	= 27.30	
		1×1	30.0	$\frac{4.50+4.50}{2}$	0.20	= 27.0	
		1×1	6.20	$\frac{4.50+4.50}{2}$	0.20	= 5.58	
		1×1	30.0	$\frac{4.40+4.30}{2}$	0.20	= 26.10	
		1×1	30.0	$\frac{4.30+4.50}{2}$	0.20	= 26.40	

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565927

Serial No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
		1×1	30.00 $\left(\frac{4.50+4.60}{2}\right)$		0.20	= 27.30	
		1×1	30.0 $\left(\frac{4.60+4.90}{2}\right)$		0.20	= 28.50	
		1×1	4.50 $\left(\frac{4.90+4.90}{2}\right)$		0.20	= 4.41	
		1×1	30.0 $\left(\frac{4.80+5.50}{2}\right)$		0.15	= 23.18	
		1×1	24.00 $\left(\frac{4.30+3.00}{2}\right)$		0.15	= 13.14	
						455.84 m	3

ಮುಖ್ಯ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಪೂರ್ವ ಉಪವಿಭಾಗ, ಬಾಪೂಜಿನಗರ ಪಾಲಿಕೆ
ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಬೆಂಗಳೂರು

3) Construction of dry lean cement concrete mix CC 1:5:10 with

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
	OPC cement @ 160 kgs, with 25mm and down size graded granite metal coarse kgs complete.						
	11TH cross road =	1×1	30.00	$\frac{(4.30+4.30)}{2}$	0.15	= 19.35	
		1×1	30.0	$\frac{(4.30+3.90)}{2}$	0.15	= 18.45	
		1×1	30.0	$\frac{(3.90+3.40)}{2}$	0.15	= 15.53	
		1×1	8.40	$\frac{(3.0+3.70)}{2}$	0.15	= 4.22	
	12TH cross road =	1×1	30.0	$\frac{(4.50+4.60)}{2}$	0.15	= 20.48	
		1×1	30.0	$\frac{(4.60+4.30)}{2}$	0.15	= 20.03	
		1×1	30.0	$\frac{(4.30+4.50)}{2}$	0.15	= 19.80	
		1×1	30.0	$\frac{(4.50+4.50)}{2}$	0.15	= 20.25	
		1×1	7.60	$\frac{(4.50+4.50)}{2}$	0.15	= 5.13	

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565928

Name of Work ..... From..... To.....

Name of Contractor of nature of Agency .....

Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
	13TH cross road =	1×1	30.0	(5.10+4.50)/2	0.15	= 21.60	
		1×1	30.0	(4.50+4.60)/2	0.15	= 20.48	
		1×1	30.0	(4.60+4.50)/2	0.15	= 20.48	
		1×1	30.0	(4.50+4.50)/2	0.15	= 20.25	
		1×1	6.20	(4.50+4.50)/2	0.15	= 4.18	
	14TH cross road =	1×1	30.0	(4.40+4.30)/2	0.15	= 19.58	
		1×1	30.0	(4.30+4.50)/2	0.15	= 19.80	
		1×1	30.0	(4.50+4.60)/2	0.15	= 20.48	

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
		1×1	36.00	$\frac{(4.60+4.90)}{2}$	0.15	= 21.37	
		1×1	4.50	$\frac{(4.90+4.90)}{2}$	0.15	= 3.30	
		1×1	30.0	$\frac{(4.80+5.50)}{2}$	0.12	= 18.54	
		1×1	24.0	$\frac{(4.30+3.00)}{2}$	0.12	= 10.51	
						343.81 m³	
						Limit to = 342.66 m³	

Ckd ∝ Re

12/5/17

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು-

12/5/17

BR-167
30.06.17

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565929

Serial No. First & Final Bill
Name of Work Improvement to c.c road in Dasarahalli Adjacent main road in ward no. 13. Shettyhalli sub Division From ..... To .....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
	2	Number 3	Length 4	Breadth 5	Depth 6	7	8
	Est. cost Rs. 50,00,000/-						
	Job code no:- 013-17-000083.						
	AS/NO:- IC/D2/AS/08/17-18, Dt:- 27/04/2017						
	TS/NO:- CB/D2/TS/44/17-18, Dt:- 28/04/2017						
	work order no:- BBMP/EB/DD/WO/48/17-18, Dt:- 02/05/17						
1	Earthwork excavation by manual mean in ordinary soil including in average horizontal throws upto 2m & an average lift upto 1.5m						

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
	excavated surface levelled & sides neatly dressed, the disposed earth to be levelled neatly after breaking of clods complete in all respects						
	= Qty vide premeasurement sheet No B Page No = 565/25						
			1304.92 m^3	@ Rs 175.96/cum		Rs 229614.6	
(2)	construction of granular sub-base by providing coarse-graded crushed stone aggregate of granite/ trap/ basalt materials, spreading in uniform layers with motor grader on prepared surface, mixing by mix in place method with rotavator at OMC and compacting with vibratory roller						

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565930

Serial No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
	to achive the desired density. Complete as per specification by ma in place method for Grading - II material.						
	= Qty vide premeasurement ref TM 3 Page no: 565927						
	455.84 m³ @ Rs 1582.58/cum Rs					721403.00	
	(3) construction of dry lean cement concrete mix cc 1:5:10 with opc cement @ 160 kgs. with 25 mm nominal down size graded granite metal coarse aggregate of 0.86 cum and fine aggregate @ 0.58 cum						

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
	Sub-base over a prepared sub-grade with (Course and fine aggregate Continuing to IS:383) aggregate cement ratio not to exceed 15:1 Aggregate gradation after blending to be as per table 600-1, Aggregate gradation after blending to table 600-1, cement content not to be less than 160 kg/cum, optimum, moisture content to be less than 10 MPa at 7 days mixed in a batching plant, transported to site, laid with a paver with electronic sensor, compacting with 8-10 tonnes vibratory roller, finishing as per specifications = Qty vide Pre-measurements page no:- 565928/2						
		342.86 m³			Qty. 3986.66/cum	Rs	1366069.50

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565931

Serial No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
	Cement Concrete Pavement, construction of un-reinforced plain cement concrete pavement, thickness as per design, over a prepared sub base with OPC cement or any other type as per clause 1051.2.2 with 25mm nominal down size graded granite metal coarse aggregate, and fine aggregate, with Inplasticizer @ 3lts conforming to IS9103 1999 reaffirmed - 2003, mixed in a concrete mixer of not less than 0.6 cum capacity and appropriate weigh batcher as per approved mix design, laid in approved fixed side form work steel channel, laying and fixing of 125 micron thick polythene film wedges, steel plates including levelling the form work of						

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
	per drawing) & spreading the concrete with shovels, rakes, compacted using needle & screed and plate vibrators and finished with floats in a continuous operation including provision of contraction, expansion, construction and longitudinal joints including groove cutting charges joint filler, separation membrane, sealant primer, joint sealant, admixtures, as approved including curing finished to line and grades as per drawing. Concrete as per specifications M30 (ab 360 kg per cum coarse aggregate @ 0.69 cum and fine aggregate @ 0.46 cum)						
	11th cross road =	1x1	30.0	$\frac{(4.30+4.30)}{2}$	0.15	= 19.35	
		1x1	30.0	$\frac{(4.30+3.90)}{2}$	0.15	= 18.45	

M. A. R. 57 (Rule 116)
Measurement Book

No. B

565932

Item No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
	12TH Cross road =	1×1	30.00	(3.40+3.00)/2	0.15	= 15.53	
		1×1	8.40	(3.00+3.70)/2	0.15	= 4.22	
		1×1	30.00	(4.50+4.60)/2	0.15	= 20.48	
		1×1	30.0	(4.60+4.30)/2	0.15	= 20.03	
		1×1	30.0	(4.30+4.50)/2	0.15	= 19.80	
		1×1	30.0	(4.50+4.50)/2	0.15	= 20.25	
		1×1	7.60	(4.50+4.50)/2	0.15	= 5.13	
	13TH Cross road =	1×1	30.0	(5.10+4.50)/2	0.15	= 21.60	

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
	14th cross road =	1×1	30.00	$\frac{(4.50+4.60)}{2}$	0.15	= 20.47	
		1×1	30.0	$\frac{(4.60+4.50)}{2}$	0.15	= 20.47	
		1×1	30.0	$\frac{(4.50+4.50)}{2}$	0.15	= 20.25	
		1×1	6.20	$\frac{(4.50+4.50)}{2}$	0.15	= 4.18	
		1×1	30.0	$\frac{(4.40+4.30)}{2}$	0.15	= 19.58	
		1×1	30.0	$\frac{(4.30+4.50)}{2}$	0.15	= 19.80	
		1×1	30.0	$\frac{(4.50+4.60)}{2}$	0.15	= 20.48	
		1×1	30.0	$\frac{(4.60+4.90)}{2}$	0.15	= 21.37	
		1×1	4.50	$\frac{(4.90+4.90)}{2}$	0.15	= 3.30	
		1×1	30.0	$\frac{(4.80+5.50)}{2}$	0.15	= 18.54	

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565933

Serial No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
		1×1	24.00	$\frac{(4.30+3.00)}{2}$	0.15	= 10.51	
						343.79	
						342.66	
				limit to =			
				Rs. 6347.96/cum		Rs	2130646.00
(5)	providing groove cutting for width of 5mm to 10mm and depth 5mm-10mm including cost of cutting machine, including cost of blade, coolant etc, including cleaning of groove & providing sand and hot bitumen filling, all other incid etc.						

Reference to last measurement 8

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
1	2	Number 3	Length 4	Breadth 5	Depth 6	7	8
	including cost of conveyance of all materials, labour etc and all other incidental charges as per drawing and as per specifications for concrete pavement.						
	11th cross =	10	3.90			= 39.0	
	12th cross =	13	4.50			= 58.50	
	13th cross =	13	4.50			= 58.50	
	14th cross =	12	4.60			= 55.20	
		5	4.0			= 20.0	
						231.20 Rmtr	
				Deduct to		222.40 Rmtr	
			Sft.	121.90/Rmtr		Rs 27110.5	

M. A. R. 57 (Rule 116)
Measurement Book

No. B 565934

Name of Work ..... From..... To.....

Name of Contractor of nature of Agency .....

Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
	2	Number 3	Length 4	Breadth 5	Depth 6	7	8
	Providing and laying reinforced cement precast slabs of mix cc 1:1 1/2:3 using 20mm + down six graded granite metal using HYSD 10mm dia steel @ 100mm c/c both ways and completing the specification missing slabs.						
		10 x	0.60	x	0.75 =	4.50	
		40 x	0.60	x	0.75 =	18.0	
		35 x	0.60	x	0.75 =	15.75	
		16 x	0.60	x	0.75 =	7.20	
		40 x	0.60	x	0.75 =	18.0	
		6 x 1	0.60	x	0.75 =	1.74	

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8
		4x1	0.60	x 0.75 =		1.80	
						66.99 m²	
						Less 1% = 65.58 m²	
						@ Rs 1680.0/sqm Rs 110174.0	
						Total Rs 4585016.0	
						Rs 412651.0	
						Grand Total Rs 4997667=00	

Cld & Rl
30/6/17

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸನಪುರ ಮತ್ತು
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು

Add 9% 6 [illegible] charges
30/6/17

M. A. R. 57 (Rule 116)
Measurement Book

No. B

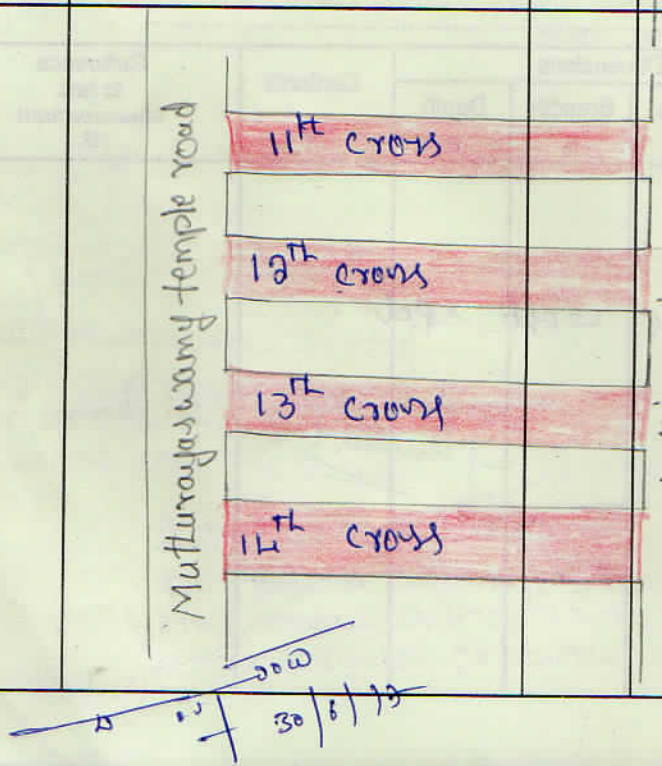
565935

Serial No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
	2	3	4	5	6	7	8
	Certificate: * Work done in satisfactorily * All debris clear from the work spot. 30/6/17 ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು ತಲಘಟ್ಟಪುರ ಉಪವಿಭಾಗ, ಹಾಸರಹಳ್ಳಿ ವಲಯ ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ ಎಸ್.ಎಂ. ಕೃಷ್ಣ, ರವೀಂದ್ರನಗರ, ಬೆಂಗಳೂರು						

MEASUREMENT BOOK

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
		Number	Length	Breadth	Depth		
1	2	3	4	5	6	7	8



ಸಹಾಯಕ ಉಪವಿಭಾಗಾಧಿಕಾರಿ ಅಭಿಯಂತರರು
ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಎಸ್.ಎಂ. ರಸ್ತೆ, ರಮೇಶನಗರ, ಬೆಂಗಳೂರು

M. A. R. 57 (Rule 116)
Measurement Book

No. B

565936

Name No. .....
Name of Work ..... From..... To.....
Name of Contractor of nature of Agency .....
Date of commencement of work .....

Date	Full description, etc, of work	Dimensions				Contents	Reference to last Measurement
	2	Number 3	Length 4	Breadth 5	Depth 6	7	8
	R-245						
	Amount applied for Rs.	499667					
	Passed by Cheque for Rs.	433461					
		—					
		666206					
	By adjustment Rs.						
	K Shanthi						
	Asst. Superintendent						
	B.B.M.P. Dasarahalli						

Reference to last Measurement
8